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Description of WO9526306

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Closure invention relates to closure with closure cap and caps, whereby in closure cap easy deformable, anyhow in deformation state donation opening training sealing element received is, which is an extending on the other hand upward on the one hand downward a support member of the closure cap by crosswise over the sealing element and by a mounting plate flange, against which the sealing element within a radial outside plant range rests from  
 5 downside, supported, whereby the other sealing element from a catch position into a donation position against its curved shape bottom lifting of the support member outward is to be pressed.

A such closure is bspw. from the US-PS 5.115.950 known. Here the sealing element possesses cruciform extending slots. In the donation position, if the sealing element is outward pressed against its curved shape, the slots gape and make the product withdrawal possible. The lying close flanks of the slots immediate in the reset, the closure position  
 10 corresponding position of the sealing element together lead, also due to the bias dominant regarding the spherical curvature of the sealing element to a very rapid closure of the donation opening in trains resetting the sealing element. This has with the use to the succession that outside residual amounts at expenditure medium, relatively large at the donation opening, set off.

Regarding the aforementioned state of the art busy itself the invention with the technical problems position to  
 15 improve the known closure regarding its expenditure characteristic.

This technical problem is first and essentially 1 dissolved with the subject-matter of the claim, whereby on the fact stopped is that the sealing element exhibits a continuous open, only donation in the middle opening sealed by support on the support member in the catch position. Because the donation in the middle opening is continuous open, arises in the case of a donation procedure a very favourable expiration of happening. If increased on a  
 20 deformable bottle, is applied on which the closure, pressed becomes, itself the internal pressure in the bottle and the sealing element, which consist of a plastic material, the easy deformed, becomes outward pressed by the pressure from the catch position into the donation position against its curved shape, whereby it takes off from the support member. As soon as the lifting has inserted, flows in a container, bspw. a plastic bottle, is applied on which the  
 25 closure, contained expenditure medium between the sealing element and the support member and in the other it withdraws from the donation in the middle opening outward. As soon as the pressure is taken back on the bottle, elastic the for this resettable formed container seeks to reset itself elastic, whereby in the container a vacuum adjusts itself. The sealing element, which is pressurized no longer, resets itself then into its original curved shape and strives to take the catch position. Due to the continuous open donation in the middle opening in addition, a vacuum prevails to here still located expenditure medium concerning the donation in the middle opening and becomes into the  
 30 container back-sucked, anyhow so long, when the catch position is again occupied not yet. It results thus backsucks effect, which possesses itself a favourable effect regarding outer residual amounts setting off on the sealing element. In other embodiment of the invention provided that the sealing element is in the closure movable received, is in such a manner that with vacuum a deformation of the plant range can be formed inward, whereby an air path to negative pressure reconciliation outside of a donation opening and/or. develops for the donation in the middle opening  
 35 between the mounting plate flange and the plant range. This air reconciliation supported the described Rücksaugeneffekt. An of the donation in the middle opening does not fit to necessary such a vacuum still favourably that it comes immediately to sucking through air into the interior in the region of the donation in the middle opening, on the contrary a certain Zurücksaugung of the there located expenditure medium will only occur. Substantial, and also pulling negative pressure reconciliation still full after recovery of the sealing element into the catch position  
 40 takes place itself preferred over the deformation of the plant range of the sealing element inward and opening of an air path into the interior of the bottle thereby. The donation in the middle opening is preferred circular formed. On the support member preferred, associated are to the donation in the middle opening of the sealing element, a pin formed in other detail. This pin partly brought in in the catch position into the donation in the middle opening. Thereby a reliable seal and support of the storage of the sealing element in the closure result. The support member can be  
 45 favourable other by means of an extent support ring at the closure snatch-supported. Also is it preferred that the support member exhibits radial struts, which a middle supporting plate, when which is the support member preferred formed, with the extent support ring connect. At the cap a blank holder is formed to the transport lock of the sealing element in other preferred detail, whereby here additional also substantial is that the blank holder affects only in the region of the supporting plate the sealing element. With the here described subject-matter it acts around a closure,  
 50 that it possible to transport a sealed transportation bottle with a liquid also then without leakages if pressure becomes on these applied, it however nevertheless permits that one can take product by opening the flip cover out of the bottle, by pressing on her that she can become however on the other hand suspended mounted with the opening downward, without liquid withdraws from it. Such a closure is among other things particularly for liquid soaps, those in public buildings notices, like also for showers in the own bathroom suitable, in order to simplify the  
 55 so far very pedantic procedures to the removal of shower from the container significant.

Appended one is the invention of the other on the basis the accompanying drawing explained. Here shows: Fig. 1 a

first cross sectional view closure of a cap with inserted sealing element; Fig. 2 a bottom view in accordance with the closure cap

Fig. 1, in one concerning Fig. 1 around 90° turned position, with formed catch DEK kel; Fig. 3 the closure cap in accordance with Fig. 1 and/or. Fig. 2 in the closed condition, on second crosswise cut average, also opposite Fig. 1 cutting plane rotated around 90°; Fig. 4 an illustration in accordance with Fig. 1, in the donation position; Fig. 5 an illustration in accordance with Fig. 1, in backsuck position.

- ▲ top Shown one and described is a closure, which exhibits a closure cap 1 with a sealing element 2 inserted therein. The closure cap 1 consists of a plastic spraying body. The closure cap 1 is other formed with the embodiment as screw cap. Three threads 3 are to be recognized.

10 Of it different can be the closure cap also as putting catch or bouncing catch formed.

An edge wall 4 of the closure cap, on which the threads are interiorlateral 3 formed, trains top, essentially circumferential, with altogether circular embodiment, an edge shoulder 5, which downward profile opened in the cross section as essentially u-shaped, presents itself. Pointing at that radial inner U-leg of the edge shoulder 5 is, into the interior of the closure cap, an annular ridge 6 formed. It exhibits itself about an half cross section-wide of the interior of U-leg and extended still over an extent support ring 7, which appended in other detail described is, outside downward.

In other embodiment an horizontal longitudinal transition piece is 8 formed to the inner U-leg, which continues to ignore the half of the external dimensions of the U-leg mentioned after radial inside into an again increased, for instance at height exhibiting essentially annular inner patch 9. The inner patch 9 is provided central with an opening 19. The diameter of the opening 19 is in its size 2 adapted to a concave formed region of the sealing element. The inner patch 9 exhibits itself bottom-laterally a rest thigh 10, the parallel to the bar mentioned 6 extended. The rest thigh 10 possesses 11-outside at the detent thigh 10 in its bottom portion circumferential rest bulge and in a space 12 engaging created by the increase approximately over the transition piece 8 is the extent support ring 7, which the support member stop ore, snatch-fixed.

25 The inner patch 9 exhibits radial inside concerning the rest thigh 10 an other planar lower support surface 13 and after radial outer subsequent one for this in an acute angle longitudinal, downward inclined auxiliarsupport-flat 14. At the support surface 13 and/or. the auxiliarsupport-flat 14, and the latter embracing, into a gusset 15 engaging formed between the auxiliarsupport-flat 14 and the rest thigh 10, lies close - at its top - the sealing element 2. The support surface 13 and the auxiliarsupport-flat 14 form the mounting plate flange (top) for the sealing element 2 with the embodiment altogether. The sealing element 2 continues to lie bottom-laterally - in in Fig. 1 represented catch position - on the support member 17 on, which is formed in detail as supporting plates here. This is also significant bspw. from Fig. to infer 2. On the supporting plate a pin is 16 formed, which with the embodiment konusförmig designed is. An tap-high corresponds for instance to a third of the thickness of the sealing element 2. With a suspension/an use with opening pointing downward 19 the starch is and/or in the rest of. Elasticity of the sealing element 2 so selected that the pressure is not by the dead weight of the donation medium contained in the container strong enough, in order to remove the sealing element 2 also only bischen from the pin 16. It lies close to solid and prevented so a liquid withdrawal.

The supporting plate 17 is 7 connected over four struts 18 with the extent support ring. A diameter of the supporting plate is for instance a double measure compared with the diameter of a strut 18.

40 The sealing element 2 is altogether, in its opening 19 in the plate 9 associated region, related to the catch position in accordance with Fig. 1, concave formed.

Subsequent, and a bottom in for instance right angles alpha to the discharge direction of the concave design extending Hieran, a plant flange is 20 formed at the sealing element 2. This rests against the support surfaces 13 and the auxiliarsupport-flat 14, like already essentially described.

45 Like the other Fig. 2 and 3 to infer is, is to the closure cap 4, in detail to the edge shoulder 5, a cap 21 over a film hinge 22 formed. The cap 21 possesses in principle a rectangular design, with rounded off narrow sides.

In the coverage of the straight longitudinal peripheral edges of the cap 21 with the edge shoulder 5 these as it were cut are and/or. not formed.

50 A blank holder 22 formed at the cap 21, which possesses the shape of a cylindrical, downward open nozzle, continues to be bottom lateral.

In the sealed state this blank holder affects 22 in such a way the sealing element 2 that a transport lock is given. Even with pressure on a bottle/ Container, on which the closure is, cannot withdraw product. Fig. 3 shows the state of the closure with the transport.

55 In the sealing element 2 the other a central circular donation in the middle opening is 23 formed. The blank holder 22 supports in detail in the closed condition the edge region of the donation in the middle opening 23, and only these, against the supporting plate 17 off and/or. presses the edge region on the supporting plate 17. An inside diameter of the blank holder 22 is 23 adapted to a diameter of the donation in the middle opening, D. h. same or around a weniges grö more sser.

60 From in Fig. 4 represented donation position is apparent that the sealing element 2 becomes with increase of an internal pressure in the closure cap against its - concave - curved shape bottom lifting of the supporting plate 17 outward pressed. The concave shape of the sealing element 2 is in the donation position strong attenuated with a tendency for smoothing-out. Here flow paths become 24 opened, which let product withdraw bottom flow past the supporting plate 17 from the donation in the middle opening 23. The sealing element 2 does not curve in the donation position however over the opening 19 outward outside.

65 If the donation pressure in the closure cap 4 diminishes, and/or. into a vacuum, forms the sealing element 2

changes itself into the catch position in accordance with Fig. 1 and/or. Fig. 5 back and beyond that made by then the vacuum a lifting of an edge region of the sealing element 2 dominant in the closure cap 4, so that air paths 25 result.

5 All disclosed features are invention-substantial. Into the disclosure of the application hereby also revealing contents of the associated/accompanying priority documents (copy of the advance notification) also to the full extent included, also to the purpose to take up features of these supports to claims of instant application with.